Remarks:

Applicants appreciatively acknowledge the Examiner's confirmation of receipt of Applicants' claim for priority and certified copy of the priority document under 35 U.S.C. § 119(a)-(d).

Reconsideration of the present application is respectfully requested.

Claims 1 - 2 and 4 - 7 are now pending in the present application. Applicant would like to thank the Examiner for the detailed suggested amendments made on pages 2 - 3 of the Office Action. Claims 1, 2 and 4 have been amended, in part as recommended in the Office Action, as well as to more clearly set forth Applicants' claimed invention. Although it was recommended in the Office Action that claim 1 be amended to recite that "m, k and f are integers greater than one", this suggestion has been incorporated in claim 1 as "m and k are integers greater than one", as it is possible for the frequency f to be a non-integer. As was previously presented, claim 5 depends directly from claim 4. New claim 6 is being presented herein, which new claim includes steps that were formerly presented in claim 2, but which have been deleted from that claim. New claim 7 is former claim 3, which has been renumbered to permit it to depend from new claim 6.

Original claim 3, which depended from the previously presented claim 2, has been canceled.

Applicants thankfully acknowledge that formerly presented claims 2 - 3 (corresponding to present claims 6 and 7) were indicated as being allowable if rewritten in independent form including all of the limitations from which they depend. Claims 4 and 5 were indicated to be allowable if amended to overcome the cited informalities, which have been addressed herein.

However, in paragraph 2 on page 3 of the above-identified Office action, claim 1 was rejected as being allegedly obvious under 35 U.S.C. § 103(a) over U. S. Patent No. 6,237,014 to Freidin et al. ("**FREIDIN**") in view of U. S. Patent No. 6,226,322 to Mukherjee ("**MUKHERJEE**"). Applicants respectfully traverse the above rejection.

The rejection has been noted and claim 1 has been amended in an effort to even more clearly define the invention of that claim, wherein the number of bits "m" and the number of sections "k" are integers greater than 1, and "k" is less than "m". Support for the change is found on page 12, lines 13 - 18 of the present application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1, as amended herein, among other limitations, calls for a communications acquisition method for correlating a received binary-coded spread sequence with a locally generated spread sequence having *m* bits in *k* sections including the steps of:

> "splitting the stored received binary-coded spread sequence into *k* sections; and
>
> correlating the *k* sections of the stored received binary-coded spread sequence at a frequency *k*f* with corresponding *k* sections of the locally generated spread sequence, wherein *m* and *k* are integers greater than 1, and *k* is smaller than *m*."

As will be shown herebelow, the specific limitations of Applicants' claim 1 are neither taught, nor suggested, by the **FREIDIN** or **MUKHERJEE** references.

In the Office Action, it is admitted that **FREIDIN** does not explicitly teach that the correlating step occurs at a frequency of k*f. The **FREIDIN** reference additionally fails to teach or suggest, among other limitations of Applicants' claim 1, that the received binary-coded spread sequence m bits in length is split into k sections, where m and k are integers greater than 1 and where k is less than m.

Further, the **MUKHERJEE** reference does not supply the elements of claim 1 that are missing from **FREIDIN**. As admitted in the

Office Action, **FREIDIN** does not explicitly teach that the correlating step occurs at a frequency of k*f. Applicant submits that **MUKHERJEE**, likewise, fails to teach Applicants' claimed correlating step at a frequency of k*f. **MUKHERJEE** fails to teach correlating a data sequence at a rate higher than the input rate of the data sequence. The oversampler (44C of Fig. 4 of **MUKHHERJEE**) does not prepare an oversampled signal used for correlation processing. Oversampling is performed for the reason that the downstream analog low pass filters 50C, 50R can be realized with relatively simple, low-order filters (see the abstract of **MUKHHERJEE**). This is a completely different technical motivation for increasing the processing rate in a digital circuit and has nothing to do with correlation processing. As a result, **MUKHHERJEE** fails to teach or suggest performing a correlation processing of "k" stored received binary-coded spread sequence sections at a frequency of "k*f". Neither **MUKHHERJEE,** nor **FREIDIN,** teach or suggest using a specific multiplier of the frequency "k", where "k" is also the number of sections into which the binary-coded sequence is broken. Lacking this feature, clearly the two references can not be combined to render obvious Applicants' claim 1.

Applicants further respectfully traverse the statement made in the Office Action that:

> "Mukherjee teaches oversampling the received sequence (see 44c in Fig. 4), wherein it is well-known in the art that oversampling by twice the sampling rate meets the Nyquist rate. Therefore, it would have been obvious to one skilled in the art at the time of the invention to oversample the received sequences at a frequency of k*f, wherein Freidin may have k sections of divided sequences oversampled at the rate of k times the frequency f for the purpose of meeting and exceeding Nyquist rate theorem.

Applicants object to the above statement as pure impermissible hindsight reconstruction of the invention of claim 1. First, as described above, neither **FRIEDIN** or **MUKHERJEE** teach sampling "k" sections at a frequency of "k*f". Further, as pointed out in the Office Action, the accepted Nyquist sampling rate is twice the sampling rate, not "k" times the frequency of the received sequence, where "k" is a variable defined as the number of sections in which the bits have been divided. Applicants put forth that it would clearly not be obvious to one skilled in the art to abandon the accepted Nyquist oversampling rate convention, as suggested in the Office Action, and then to first divide the received sequence into "k" sections, and further, to oversample by "k*f".

Further, neither of the cited references (**FRIEDIN** nor **MUKHERJEE**) teach or suggest that the m bits received in a binary-coded spread sequence are split into k sections, wherein m and k are integers greater than 1 and where k is smaller than m, as required by Applicants' amended claim 1.

The limitation that "k" is smaller than "m" excludes the possibility that a section is represented by a single bit. This feature is neither taught nor suggested in the **FRIEDIN** reference. Rather Fig. 2 of **FREIDIN** shows a block diagram of a conventional programmable digital correlator 100. The correlator 100 comprises a data delay line 101 which is configured as an n-stage data sequence shift-register. See column 2, lines 34 - 35.

In **FREIDIN** while discussing the prior art, two distinct cases for inputting the received data sequence into the data delay line 101 are described. The first case is described in column 2, lines 9 - 29, and relates to a binary-coded spread sequence as an input signal. In this case, each data value is represented by a single bit and the registers 1, 2, . . ., n of the data delay line 101 are single bit registers. As noted above, in Applicants' claim 1, the limitation that "k" is smaller than "m" excludes the possibility that a section is represented by a single bit.

The second case is described in column 2, lines 29 - 51, and relates to an input data signal that is an "m-bit binary value" data signal, i.e. each data sample is represented by m bits. In this case, each register 1, 2, . . . , n of the data delay line 101 stores m bits.

Applicants' amended claim 1 requires a binary-coded spread sequence, and thus, only the teachings of the first case described in **FREIDIN** would be relevant. In that case, **FREIDIN** fails to disclose splitting the stored received binary coded spread sequence into sections, where k is smaller than m, as required by Applicants' claim 1. Further, the **MUKHERJEE** reference does not supply the missing element.

It is accordingly believed that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art. The dependent claims 2, 6 and 7 are believed to be patentable as well because they all ultimately depend from claim 1 and because the equivalents of claims 6 and 7 had been previously indicated as allowable. Claims 4 and 5 had additionally been indicated as allowable, but for some informalities that have been addressed herein.

In view of the foregoing, reconsideration and allowance of claims 1 - 2 and 4 - 7 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a

telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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For **Applicants**

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